



American
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Neurological
Surgeons



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*Challenges in the Spine Specialty
Program Book*

18th Annual Meeting

American Association of Neurological Surgeons
and Congress of Neurological Surgeons

Section on Disorders of the Spine and Peripheral Nerves

Orlando

The Program Book is sponsored in part, by an
educational grant provided by:

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SPINE

February 27–March 2, 2002

Disney's Yacht and Beach Club Resorts
Lake Buena Vista (Orlando), Florida



Program at a Glance

Time	Wednesday February 27	Thursday February 28	Friday March 1	Saturday March 2
6am				
7am		6:30-7:45am BREAKFAST Asbury Lobby	6:30-7:45am BREAKFAST Asbury Lobby	6:30-7:45am BREAKFAST Asbury Lobby
8am		7:05-8:50am SCIENTIFIC SESSION I Salons 5-8	6:45-7:30am CHALLENGING SPINE TUMOR CASES	6:45-7:30am CHALLENGING SPINE TRAUMA CASES
9am		8:00am-12:00pm EXHIBIT & POSTER VIEWING Grand Harbor North and South Ballroom, Salons 1-4	7:30-9:15am SCIENTIFIC SESSION III Salons 5-8	7:30-9:30am SCIENTIFIC SESSION IV Salons 5-8
10am		8:00am-5:00pm EXHIBIT & POSTER VIEWING Grand Harbor North and South Ballroom, Salons 1-4	9:20-10:20am AWARDS SESSION	9:30-10:20am REFRESHMENT BREAK
11am		6:15am - 5:30pm REGISTRATION Asbury Rotunda	10:20-11:10am REFRESHMENT BREAK	10:20am-12pm CONTRIBUTED PAPERS
12pm		10am-12pm CONTRIBUTED PAPERS	11:10am-12pm ANNUAL BUSINESS MEETING	
1pm		12-1pm LUNCH WITH EXHIBITORS Exhibit Hall	11:10-11:50am ORAL POSTER PRESENTATIONS	
2pm	12-6:30pm REGISTRATION Asbury Rotunda	1-3:10pm CONTRIBUTED PAPERS & ORAL POSTER PRESENTATIONS	12:15pm- GOLF TOURNAMENT Disney's Palm Golf Course	
3pm	1-5pm SPECIAL COURSE I Asbury A&B	3:10-4pm REFRESHMENT BREAK	1pm- TENNIS TOURNAMENT Tennis Courts at the Contemporary Resort	1-5pm SPECIAL COURSE II Asbury A
4pm		4-5:30pm SCIENTIFIC SESSION II Salons 5-8		1-5pm SPECIAL COURSE III Asbury B
5pm				1-5pm SPECIAL COURSE IV Asbury C
6pm		5:30-7:30pm "HAPPY HOUR ON THE BEACH" Beach Club Beach		
7pm	6:30-9pm OPENING RECEPTION Yacht Club Marina			
8pm				
9pm				

Welcome Letter

Dear Colleagues:

It is our pleasure to welcome you to the 18th Annual Meeting of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves. The Annual Meeting Committee is glad that you could join us at this outstanding educational event.

We thank the members of the Scientific Program Committees for their efforts in developing this year's program, and to all those who have volunteered to participate in the Scientific Sessions. We have structured this meeting to foster active interchange between the speakers and the audience during all phases of the meeting, including the special courses, scientific sessions, and abstract presentations.

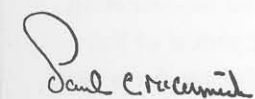
Four Scientific Sessions are scheduled to be presented by experts in the field of neurosurgery, and other experts in various fields, covering a variety of topics. The Scientific Program Committee carefully reviewed the evaluations and your comments from last year. Some requests included more Oral Poster Presentations and an educational activity for the afternoon of the golf and tennis tournaments. In response, we have doubled the number of Oral Poster Presentations for this meeting and will be offering a practice management seminar to enhance educational opportunities. We hope these changes, plus many others based on evaluation comments, will enhance your experience at this very important meeting.

This year we have also introduced an evaluation incentive program. One lucky attendee will have his or her completed evaluation selected from all the forms inserted in the designated collection boxes at the end of each day. Each morning the name of the winner will be displayed at the registration desk where a gift for participation can be collected.

We look forward to the presentations of over 100 Oral, Oral Poster, and Poster Abstracts during our time here in Orlando, as well as to interaction with over 50 exhibitors who are here to share their latest technology and support for the meeting. We would like to take this opportunity to thank the exhibitors and sponsors for supporting the educational program and helping to assure the meeting's success.

We hope that you will enjoy the camaraderie and professional interchange over the next several days.

Sincerely,



Paul C. McCormick, MD
Chairman



Robert F. Heary, MD
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Chairman



Joseph T. Alexander, MD
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PREVIOUS MEETINGS

- 2001**—Phoenix, Arizona
- 2000**—Rancho Mirage
(Palm Springs), CA
- 1999**—Lake Buena Vista
(Orlando), FL
- 1998**—Rancho Mirage
(Palm Springs), CA
- 1997**—Newport Beach, CA
- 1996**—Lake Buena Vista, FL
(Orlando), FL
- 1995**—Phoenix, AZ
- 1994**—Fort Lauderdale, FL
- 1993**—Tucson, AZ
- 1992**—Miami, FL
- 1991**—Rancho Mirage
(Palm Springs), CA
- 1990**—Captiva Island, FL
- 1989**—Cancun, Mexico
- 1988**—Phoenix, AZ
- 1987**—Boca Raton, FL
- 1986**—San Diego, CA
- 1985**—Greenleaf, FL

FUTURE MEETINGS

- 2003**—Tampa, FL
March 5–8
- 2004**—San Diego, CA
March 17–21

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This activity has been planned and implemented in accordance with the Essentials and Standards of the Accreditation Council for Continuing Medical Education through the joint sponsorship of American Association of Neurological Surgeons (AANS) and the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves.

The Accreditation Council for Continuing Medical Education (ACCME) accredits the AANS to sponsor continuing medical education for physicians.

The AANS designates this educational activity for a maximum of 16 hours in category 1 credit toward the AMA Physician's Recognition Award with an additional 3.5-4 hours of category 1 credit available for each special course attended.

Each physician should claim only those hours of credit that he/she actually spent in the educational event.

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Disclaimer

The material presented at the 18th Annual Meeting has been made available by the American Association of Neurological Surgeons for educational purposes only. The material is not intended to represent the only, nor necessarily best, method or procedure appropriate for the medical situations discussed, but rather is intended to present an approach, view, statement, or opinion of the faculty, which may be helpful to others who face similar situations.

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These regulations vary depending on the risks associated with the drug or medical devices compared to products already on the market, and the quality and scope of the clinical data available.

Some drugs and medical devices demonstrated or described on the print publications of the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves have FDA clearance for use for specific purposes or for use only in restricted research settings. The FDA has stated that it is the responsibility of the physician to determine the FDA status of each drug or device he or

she wishes to use in compliance with applicable law.

Neither the content (whether written or oral) of any course, seminar or other presentation in the program, nor the use of a specific product in conjunction therewith, nor the exhibition of any materials by any parties coincident with the program, should be construed as indicating endorsement or approval of the views presented, the products used, or the materials exhibited by the AANS/CNS Section on Disorders of the Spine and Peripheral Nerves, or by its Committees, Commissions, or Affiliates.

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Daniel K. Resnick, MD
Gerald E. Rodts, Jr., MD
Timothy C. Ryken, MD
Kenneth S. Yonemura, MD

2000

Joseph T. Alexander, MD
Paul M. Arnold, MD
Nevan G. Baldwin, MD
Perry A. Ball, MD
Christopher H. Comey, MD
Brian G. Cuddy, MD
Michael G. Fehlings, MD
Allan H. Friedman, MD
Mitchell R. Gropper, MD
Regis W. Haid, Jr., MD
Andrea L. Halliday, MD
H. Louis Harkey III, MD
Robert F. Heary, MD
R. John Hurlbert, MD, PhD
John Knightly, MD
Carl Lauryssen, MD
Allan D. Levi, MD, PhD, FRC
Christopher G. Paramore, MD
Gerald E. Rodts, Jr., MD
William S. Rosenberg, MD
Timothy C. Ryken, MD
Robert L. Tiel, MD
Vincent C. Traynelis, MD
Christopher J. Wolfia, MD
Eric J. Woodard, MD
Seth M. Zeidman, MD

1999

Joseph T. Alexander, MD
Nevan G. Baldwin, MD
Allan J. Belzberg, MD
Charles L. Branch, Jr., MD
Brian G. Cuddy, MD
Richard G. Fessler, MD, PhD
Michael G. Fehlings, MD
Kevin T. Foley, MD
Regis W. Haid, Jr., MD
Andrea L. Halliday, MD
H. Louis Harkey III, MD
Noel I. Perrin, MD
Stephen M. Papadopoulos, MD
Gerald E. Rodts, Jr., MD
Robert L. Tiel, MD

1998

Nevan G. Baldwin, MD
Charles L. Branch, Jr., MD
Brian G. Cuddy, MD
Richard G. Fessler, MD, PhD
H. Louis Harkey III, MD
Gerald E. Rodts, MD

1997

Ronald I. Apfelbaum, MD
Paul M. Arnold, MD
Nevan G. Baldwin, MD
Perry A. Ball, MD
Allan J. Belzberg, MD
Brian G. Cuddy, MD
Curtis A. Dickman, MD
Kevin T. Foley, MD
H. Louis Harkey III, MD
James P. Hollowell, MD
David G. Kline, MD
Paul C. McCormick, MD
Christopher G. Paramore, MD
Noel I. Perin, MD
Charles B. Stillerman, MD

1996

Nevan G. Baldwin, MD
Brian G. Cuddy, MD
Kevin T. Foley, MD
Allan H. Friedman, MD
Regis W. Haid, Jr., MD
H. Louis Harkey III, MD
Patrick W. Hitchon, MD
James P. Hollowell, MD
Richard K. Osenbach, MD
Allan H. Friedman, MD
Noel I. Perin, MD
Robert B. Snow, MD
Richard H. Tippetts, MD
Dennis G. Vollmer, MD

1995

Charles L. Branch, Jr., MD
David W. Cahill, MD, FACS
Paul R. Cooper, MD
Curtis A. Dickman, MD
Michael G. Fehlings, MD
Regis W. Haid, Jr., MD
H. Louis Harkey III, MD
James P. Hollowell, MD
Peter M. Klara, MD, PhD
John Knightly, MD
John E. McGillicuddy, MD
Eugene Rossitch, Jr., MD
Charles B. Stillerman, MD
Vincent C. Traynelis, MD

1994

David W. Cahill, MD, FACS
Curtis A. Dickman, MD
Richard G. Fessler, MD, PhD
Peter G. Gianaris, MD
H. Louis Harkey III, MD
Paul C. McCormick, MD
Russ P. Nockels, MD
Moris Senegor, MD
Vincent C. Traynelis, MD

1993

Charles L. Branch, Jr., MD
David W. Cahill, MD, FACS
Curtis A. Dickman, MD
Richard G. Fessler, MD, PhD
Regis W. Haid, Jr., MD
Robert J. Martin, MD
John E. McGillicuddy, MD
Gary L. Rea, MD
Stephen M. Papadopoulos, MD
Noel I. Perin, MD
Moris Senegor, MD

1992

Bennett Blumenkopf, MD
Charles L. Branch, Jr., MD
David W. Cahill, MD, FACS
Richard G. Fessler, MD, PhD
Stephen M. Papadopoulos, MD
Gary L. Rea, MD

1991

Joy Aprin, MD
Benjamin G. Benner, MD
Lawrence F. Borges, MD
Nancy Epstein, MD
Emily D. Friedman, MD

1990

Bennett Blumenkopf, MD
Paul D. Dernbach, MD
Nancy Epstein, MD
Edward C. Tarlov, MD

1989

John C. Godersky, MD
Patrick W. Hitchon, MD
Arnold H. Menezes, MD
Carole A. Miller, MD
Russell T. Travis, MD

1988

Melville P. Roberts, MD
Richard Saunders, MD
Volker K.H. Sonntag, MD
Russell T. Travis, MD
Harold A. Wilkinson, MD

1987

Joel N. Abromovitz, MD
Timothy Harrington, MD
Robert S. Hood, MD
Volker K.H. Sonntag, MD

1986

Stanley J. Goodman, MD
Barth A. Green, MD
John F. Howe, MD
Hector E. James, MD
Randall W. Smith, MD
Volker K.H. Sonntag, MD
Philip R. Weinstein, MD

1985

Barth A. Green, MD
George W. Sypert, MD

Mayfield Award Recipients/Meritorious Service Award Recipients

MAYFIELD AWARD RECIPIENTS

2002

Basic Science

Edward R. Smith, MD
Quincy, MA

Clinical Science

Ketan R. Bulsara, MD
Durham, NC

2001

Basic Science

Ketan R. Bulsara, MD
Durham, NC

Clinical Science

Gordon W. Tang, MD
Atlanta, GA

2000

Basic Science

Neill M. Wright, MD
St. Louis, MO

Clinical Science

Viswanathan Rajaraman, MD, FRCS
Newark, NJ

1999

Basic Science

Steven Casha, MD
Toronto, ON, Canada

Clinical Science

Nicholas Theodore, MD
Phoenix, AZ

1998

Tord D. Alden, MD
Charlottesville, VA

1997

Michael A. Morone, MD, PhD
Atlanta, GA

1996

Basic Science

Paul C. Francel, MD
Troy, VA

Clinical Science

Paul D. Sawin, MD
Iowa City, IA

1995

Simcha J. Weller, MD
Boston, MA

1994

Timothy C. Ryken, MD
Iowa City, IA

1993

Clinical Science

Gerald F. Tuite, MD
Ann Arbor, MI

Basic Science

Allan D. Levi, MD, PhD, FRC
Miami, FL

1992

Rajiv Midha, MD
Toronto, ON, Canada

1991

Peter G. Gianaris, MD
Eau Claire, WI

1990

R. John Hurlbert, MD, PhD
Toronto, ON, Canada

1989

Richard K. Simpson, Jr., MD
Houston, TX

1988

No Award Presented

1987

John A. Feldenzer, MD
Ann Arbor, MI

1986

No Award Presented

1985

Abhijit Guha, MD
Toronto, ON, Canada

1984

Mark N. Hadley, MD
Phoenix, AZ

MERITORIOUS SERVICE AWARD RECIPIENTS

2002

No Award Given

2001

Stewart B. Dunsker, MD

2000

Arnold H. Menezes, MD

1999

Volker K.H. Sonntag, MD

1998

Russell T. Travis, MD

1997

David G. Kline, MD

1996

No Award Given

1995

No Award Given

1994

Stanford J. Larson, MD, PhD

1993

Joseph A. Epstein, MD

1992

Charles A. Fager, MD

1991

Frank H. Mayfield, MD

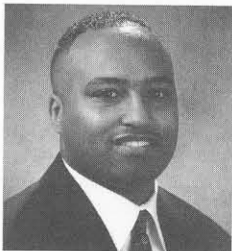
1990

Ralph B. Cloward, MD

Cloward Fellowship Recipients

2002

LANGSTON T. HOLLY, MD
LOS ANGELES, CA



Langston Holly, MD, was born in Columbia, Missouri and moved to his present home of Los Angeles,

California at two years of age. While in high school he divided his time evenly between academic and athletic pursuits. He was a National Merit Scholarship Finalist as well as a three sport athlete who garnered First-Team All-League Honors in football. He also served as captain of the rugby team that played in the national high school championship tournament, and competed internationally in Jamaica and New Zealand.

Dr. Holly attended the University of California, Berkeley, where he focused mainly on his academic and community service activities. He majored in Molecular and Cell Biology and worked as an organic chemistry tutor. He participated in the Big Brother Program, worked at a food kitchen, and was a guest speaker for several local high schools.

In 1991, Dr. Holly returned to Los Angeles when he enrolled at the UCLA School of Medicine, and received his medical degree in 1995. While in medical school, he was honored with several prestigious awards such as the National Medical Fellowship in Academic Medicine, the William G. Figueroa Award, and the Ralph Ellison Memorial Prize. Following graduation from medical school, Dr. Holly entered the UCLA neurosurgery residency program.

During his neurosurgery training, Dr. Holly developed a keen interest in spine surgery. He has been greatly influenced by Ulrich Batzdorf, MD, and Patrick Johnson, MD, and has published a number of manuscripts in the fields of syringomyelia and spinal instrumentation. He recently completed his residency in December 2001, and will be starting a spine fellowship with Kevin Foley, MD, at the University of Tennessee in January 2002.

Dr. Holly gives credit to God for all of the blessings and success in his life. He would like to thank his family for their unconditional love, inspiration, and encouragement.

PREVIOUS RECIPIENTS

2001

Jason E. Garber, MD
Houston, TX

2000

Larry T. Khoo, MD
Los Angeles, CA

1999

No Award Given

1998

No Award Given

1997

No Award Given

1996

Simcha J. Weller, MD
Boston, MA

1994

Christopher I. Shaffrey, MD
Charlottesville, VA

1995

R. John Hurlbert, MD, PhD
Toronto, ON, Canada

1993

Ziya L. Gokaslan, MD
Houston, TX

2002 Mayfield Award Recipient Biographies

MAYFIELD BASIC SCIENCE AWARD RECIPIENT

EDWARD R. SMITH, MD



The recipient of the 2002 Mayfield Basic Science Award is Edward R. Smith, MD, for his work focusing on stem cells and

spinal cord injury, titled "Increased Frequency of Cells Expressing a Neuronal Phenotype in the Injured Spinal Cord after Intravascular Transplantation with Bone Marrow Cells." This work will be presented for the first time at the 2002 AANS/CNS Section on Disorders of the Spine and Peripheral Nerves Annual Meeting in Orlando, Florida.

Dr. Smith is currently a sixth-year resident in neurosurgery at Massachusetts General Hospital and performed his research in the laboratory of E.A. Chiocca, MD. Dr. Smith's research efforts, funded in part by an American Brain Tumor Association grant, have involved the investigation of oncolytic viruses and hematopoietic stem cells. Dr. Chiocca's laboratory has a long-standing history in oncolytic viral therapy and has been developing an expanding interest in the process of stem cell transdifferentiation.

Dr. Smith was raised in Massachusetts, obtained his undergraduate degree at Dartmouth College in Hanover, New Hampshire and his M.D. at the College of Physicians and Surgeons of Columbia University in New York, New York. He has one year of residency remaining at Massachusetts General Hospital, with an expected graduation date of June 2003.

MAYFIELD CLINICAL SCIENCE AWARD RECIPIENT

KETAN R. BULSARA, MD



Dr. Ketan Ramanlal Bulsara was born in Bombay, India. In 1983, Dr Bulsara immigrated from Zambia, Africa to

the United States. He later became a naturalized citizen of the United States in 1991.

Dr Bulsara completed high school at the age of 16, and went on to Davidson College in North Carolina to study Biology. After graduating Magna Cum Laude from Davidson College, Dr. Bulsara moved on to medical school at Duke University School of Medicine where he graduated with honors. Currently, Dr. Bulsara is a Neurological Surgery Resident at Duke University Medical Center.

In addition to the Mayfield Clinical Science Award, Dr. Bulsara has been honored with other awards and grants during his residency. He was previously awarded the Mayfield Basic Science Award for the identification of the first two genes for successful regeneration in the central nervous system. This work was published in the January 2001 issue of *Nature Neuroscience*. Other awards and grants include the following: the Synthes Award for Brain and Craniofacial Trauma, the Shulman Resident Award, the International Neurosurgery Foundation Grant, the Ruth K. Broad Biomedical Research Grant, Society for Neuroscience Recognition, and a Traveling Fellowship in Neurosurgery with mentor and previous Meritorious Service Award recipient, Arnold Menezes, MD.

Dr. Bulsara has also received 14 prestigious awards and grants throughout his studies as an undergraduate and in medical school. Some of these honors include being selected by faculty and peers as the Ideal Physician of the Duke Medical School graduating class of 1992, the Howard Hughes Research Fellowship, the Dana Foundation Research Grant and the Carnegie Mellon Fellowship.

Since 1996, Dr. Bulsara has been the lead author or co-author in over 40 published research articles, case studies, abstracts, and book chapters. Many of his abstracts have also been given as oral presentations at several International or National Scientific meetings. Dr. Bulsara has also had a co-author involvement in three books, including the first electronic *Handbook of Neurosurgery*.

FRIDAY, MARCH 1

6:15 AM–1:00 PM

Registration; Asbury Rotunda

6:30–7:45 AM

Continental Breakfast; Asbury Lobby

8:00 AM–12:00 Noon

Exhibit & Poster Viewing
Grand Harbor North & South Ballroom,
Salons 1–4

10:20–11:10 AM

Beverage Break with Exhibitors; Salons 5–8
"WHAT'S NEW?" SESSION IV
Moderators: Bernard H. Guiot, MD;
Andrew T. Dailey, MD

12:15 PM

Depart for Golf Tournament
Disney's Palm Golf Course

1:00 PM

Tennis Tournament
Tennis Courts at the Contemporary Resort

SCIENTIFIC PROGRAM

6:45 AM–4:30 PM

Salons 5–8

6:45–7:15 AM

Challenging Spine Tumor Cases

Moderator: Ziya L. Gokaslan, MD

Panelists: Barry D. Birch, MD;

Seth M. Zeidman, MD

SCIENTIFIC SESSION III:

7:30–9:15 AM

**CERVICAL SPINE SURGERY:
STATE OF THE ART**

Description

This session will focus on the recent advances and latest developments in the rapidly changing arena of surgery of the cervical spine. A panel of experts will discuss new instrumentation techniques, novel and less-invasive surgical techniques, and challenges in the clearance of the cervical spine in trauma patients.

Moderators: Vincent C. Traynelis, MD;

Stephen M. Papadopoulos, MD

Learning Objectives

Upon completion of this program, participants should be able to:

1. Recognize new developments in the radiological clearance of spine trauma.
2. Discuss the evolution of cervical spine instrumentation techniques.
3. Evaluate emerging developments in cervical surgical approaches.

7:30–7:45 AM

Cervical Spine Clearance in Trauma
Mitchel B. Harris, MD

7:45–8:00 AM

Anterior Instrumentation
Regis W. Haid, Jr., MD

8:00–8:15 AM

Posterior Instrumentation
Rick C. Sasso, MD

8:15–8:30 AM

Cervical Cages
Scott H. Kitchel, MD

8:30–8:45 AM

Anterior Foramenotomy
J. Patrick Johnson, MD

8:45–9:00 AM

Posterior Foramenotomy
Tim E. Adamson, MD

9:00–9:15 AM

Laminoplasty
H. Alan Crookard, DSc FRCS

World Spine II Presentation

9:15–9:20 AM

Edward C. Benzell, MD

AWARDS SESSION

9:20–10:20 AM

Salons 5–8

Moderators: Timothy C. Ryken, MD;
Michael G. Fehlings, MD, PhD

9:20–9:35 AM

MAYFIELD BASIC SCIENCE AWARD & PAPER

Award Presented by: Timothy C. Ryken, MD
2002 Recipient: Edward R. Smith, MD

31. Increased Frequency of Cells Expressing a Neuronal Phenotype in the Injured Spinal Cord After Intravascular Transplantation with Bone Marrow Cells

Edward R. Smith, MD; Tao Cheng, MD; David Scaddad, MD; E. Antonio Chiocca, MD, PhD (Boston, MA)

9:35–9:50 AM

MAYFIELD CLINICAL SCIENCE AWARD & PAPER

Award Presented by: Timothy C. Ryken, MD
2002 Recipient: Ketan R. Bulsara, MD

32. Unravelling the Enigma of the Filum Terminale: Basic Science and Clinical Evidence

Ketan R. Bulsara, MD (Durham, NC); Thomas J. Cummings, MD; Ali R. Zomorodi, MD (Durham, NC) Alan T. Villavicencio, MD (Los Angeles, CA) Timothy M. George, MD (Durham, NC)

9:50–10:00 AM

UPDATE ON RESEARCH CONDUCTED WITH A SPINE SECTION GRANT

33. The Effect of Wearing a Restrictive Neck Brace on Driver Performance

Vincent C. Traynelis, MD; Christopher J. Barry, MD; Matthew Rizzo, MD; Warren Darling, PhD; Julie Jermeland, BS; Darin W. Smith, MD; Peter J. Lennarson, MD (Iowa City, IA)

10:00–10:15 AM

POSTER SESSION AWARDS

Awards Presented by: Michael W. Groff, MD

GRANT RESEARCH AWARDS

Awards Presented by: Michael G. Fehlings, MD, PhD

2002 CLOWARD FELLOWSHIP AWARD

Award Presented by: Timothy C. Ryken, MD
2002 Recipient: Langston T. Holly, MD

10:15–10:20 AM

UPDATE ON RESEARCH FROM THE 2001 CLOWARD FELLOWSHIP RECIPIENT

Jason E. Garber, MD

10:20–11:10 AM

Beverage Break with Exhibitors; Salons 5–8
"WHAT'S NEW?" SESSION IV
Moderators: Bernard H. Guiot, MD;
Andrew T. Dailey, MD

ORAL POSTER PRESENTATIONS

11:10–11:50 AM

Salons 5–8

Moderators: Paul M. Arnold, MD;
Mitchell R. Gropper, MD

11:10–11:13 AM

34. Craniovertebral Junction Fixation with Transarticular Screws: Biomechanical Analysis of a Novel Technique

L. Fernando Gonzalez, MD; Neil R. Crawford, PhD; Robert H. Chamberlain, BSE; Luis E. Perez Garza, MD; Mark C. Preul, MD; Nicholas Theodore, MD; Curtis A. Dickman, MD; Volker K.H. Sonntag, MD (Phoenix, AZ)

11:13–11:16 AM

35. Combination Atlas and Axis Fractures

Manali Barua, MD; Vincent C. Traynelis, MD; Timothy C. Ryken, MD (Iowa City, IA)

11:16–11:19 AM

36. Cervical Pedicle Screws/Plates or Lateral Mass Screws/Plates Combined with Anterior Plating: A Biomechanical In Vitro Study

Juan C. Bartolomei, MD (Phoenix, AZ); Kaushik Das, MD (New York, NY); Neil R. Crawford, PhD; Robert H. Chamberlain, BSE; Sung Chan Park, MD; James J. Lynch, MD; Curtis A. Dickman, MD; Volker K.H. Sonntag, MD (Phoenix, AZ)

11:19–11:22 AM

37. Posterior Lumbar Interbody Fusion (PLIF) Using an Impacted, Bioabsorbable Device

Brian R. Subach, MD (Atlanta, GA); Charles L. Branch, MD; Joseph T. Alexander, MD (Winston-Salem, NC); Regis W. Haid, Jr., MD; Gerald E. Rodts, Jr., MD (Atlanta, GA)

Meeting Agenda

Upon completion of the scientific sessions, attendees should be able to critique the value of the recommended surgical and non-surgical options presented in the scientific papers. They should also be able to evaluate the relevance of the research methodologies, and the findings and potential usefulness in the practice of the topics presented.

WEDNESDAY, FEBRUARY 27

12:00 Noon–6:30 PM

Registration
Asbury Rotunda

6:30–9:00 PM

Opening Reception at Yacht Club Marina

SCIENTIFIC PROGRAM

1:00–5:00 PM

SPECIAL COURSE I

ASBURY A and B

CUTTING EDGE SPINE TECHNOLOGIES: PRESENT AND FUTURE

Course Director: Regis W. Haid, Jr., MD

Course Co-Director: Joseph T. Alexander, MD

CME Credit: 4 hours

Description

This will be a didactic course discussing current and future technological advances that will have a daily impact on a spinal practice in the next five years. An outstanding faculty has been assembled. This course is targeted toward practicing physicians, fellows and residents, to gain an appreciation for the role of new developments in the treatment of spinal disorders.

Learning Objectives

Upon completion of this program, participants should be able to:

1. Evaluate the role of new developments in fusion and instrumentation strategies in the treatment of spinal disease.
2. Summarize the impact of advances in minimally and non-invasive techniques in spinal surgery.
3. Discuss the potential for spinal prostheses and the utility of gene therapy in the spine.

Schedule

1:00–1:05 PM

Welcome/Introduction
Regis W. Haid, Jr., MD

FUSION STRATEGIES

1:05–1:25 PM

Bone Substitutes
Edward C. Benzal, MD

1:25–1:45 PM

Bone Morphogenetic Protein (BMP)
Christopher I. Shaffrey, MD

INSTRUMENTATION STRATEGIES

1:45–2:05 PM

Non-Resorbable Polymers
Daniel K. Resnick, MD

2:05–2:25 PM

Resorbable Polymers
Brian R. Subach, MD

2:25–2:35 PM; Coffee/Refreshment Break

TECHNIQUE UPDATE

2:35–2:55 PM

Minimally Invasive
Richard G. Fessler, MD, PhD

2:55–3:15 PM

Kyphoplasty
Isadore H. Lieberman, MD

3:15–3:35 PM

Spinal Stereotactic Radiation
Joseph T. Alexander, MD

3:35–3:55 PM

Intraoperative Imaging
Eric J. Woodard, MD

THE FUTURE

3:55–4:15 PM

Gene Therapy
Gregory A. Helm, MD, PhD

4:15–4:35 PM

Artificial Disc
Vincent C. Traynelis, MD

4:35–5:00 PM; Discussion

6:30–9:00 PM

Opening Reception at Yacht Club Marina

THURSDAY, FEBRUARY 28

6:15 AM–5:30 PM

Registration; Asbury Rotunda

6:30–7:45 AM

Continental Breakfast; Asbury Lobby

8:00 AM–5:00 PM

Exhibit & Poster Viewing; Grand Harbor
North & South Ballroom, Salons 1–4

9:20–10:00 AM

Beverage Break with Exhibitors; Salons 5–8
"WHAT'S NEW?" SESSION I
Moderators: Michael G. Kaiser, MD,
Benjamin White, MD

12:00 Noon–1:00 PM

Lunch with Exhibitors; Exhibit Hall
"WHAT'S NEW?" SESSION II
Moderators: Peter C. Gerszten, MD,
Stephen T. Onesti, MD

3:10–4:00 PM

Beverage Break with Exhibitors; Salons 5–8
"WHAT'S NEW?" SESSION III
Moderators: Michael W. Groff, MD;
Ehud Mendel, MD

5:30–7:00 PM

"Happy Hour on the Beach" Reception
Beach Club Beach

SCIENTIFIC PROGRAM

7:00 AM–5:30 PM

Salons 5–8

7:00–7:05 AM

Opening Remarks

Joseph T. Alexander, MD,
Scientific Program Chairperson

Robert F. Heary, MD, Annual Meeting
Chairperson

Paul C. McCormick, MD, Section Chairperson

SCIENTIFIC SESSION I:

7:05–8:50 AM

"HOUSTON...WE HAVE A PROBLEM": COMPLICATION MANAGEMENT

Description

Considerable attention has been devoted to complication avoidance at recent meetings. This session will focus instead on the management of selected operative and postoperative complications when they occur, despite our best efforts to the contrary. A panel of experienced surgeons will discuss practical strategies for dealing with these problems when they arise.

Moderators: Edward C. Benzal, MD;
Curtis A. Dickman, MD

Learning Objectives

Upon completion of this program, participants should be able to:

1. Recognize the presentation of intraoperative and postoperative complications.
2. Discuss the surgical and non-surgical management of complications of spine surgery.

7:05–7:20 AM

Problems during CVJ Surgery
H. Alan Crookard, DSc FRCS

7:20–7:35 AM

Inadequate Intraoperative Screw Purchase
David W. Cahill, MD

7:35–7:50 AM

CSF Leak/ Pseudomeningocele
Iain H. Kalfas, MD

7:50–8:05 AM

Iatrogenic Nerve Injury
David G. Kline, MD

8:05–8:20 AM

Infection and the Instrumented Fusion
Christopher G. Paramore, MD

8:20–8:35 AM

Postlaminectomy Kyphosis
Stephen L. Ondra, MD

8:35–8:50 AM

Hardware Dislodgement/Screw Blackout
Russ P. Nockels, MD

THURSDAY, FEBRUARY 28 (CONT.)

SPECIAL SESSION

8:50–9:20 AM

Salons 5–8

SPINE TRAUMA GUIDELINES

Mark N. Hadley, MD

Introduction: Paul C. McCormick, MD

9:20–10:00 AM

Beverage Break with Exhibitors; Salons 5–8

"WHAT'S NEW?" SESSION I

Moderators: Michael G. Kaiser, MD,

Benjamin White, MD

CONTRIBUTED PAPERS

10:00 AM–12:00 NOON

Salons 5–8

Moderators: Kevin T. Foley, MD;

Gregory R. Trost, MD

10:00–10:08 AM

1. ACDP with Cornerstone-SR (Allograft and Plate: rhBMP-2 vs. Autograft)

David S. Baskin, MD (Houston, TX); Patrick G. Ryan, MD (Montgomery, AL); Richard M. Westmark, MD (Webster, TX); James J. Lynch, MD; Juan Bartolomei, MD; Nicholas Theodore, MD; Volker K.H. Sonntag, MD (Phoenix, AZ)

10:08–10:16 AM

2. An Analysis of the Use of rhBMP-2 in PLIF Constructs: Clinical and Radiographic Outcomes

Joseph T. Alexander, MD; Charles L. Branch, Jr., MD (Winston-Salem, NC); Regis W. Haid, Jr., MD; Gerald E. Rodts, Jr., MD; Brian R. Subach, MD (Atlanta, GA); Christopher I. Shaffrey, MD (Seattle, WA)

10:16–10:24 AM

3. Spine Fusion Rates of Grafton DBM Gel and Autograft Compared Side-By-Side in the Same Patient

Fred H. Geisler, MD, PhD (Chicago, IL); Frank P. Cammisa, Jr., MD (New York, NY); Gary L. Lowery, MD, PhD (Phoenix, AZ); Steven R. Garfin, MD (San Diego, CA); Peter M. Klara, MD (Norfolk, VA); Robert A. McGuire, MD (Jackson, MS); Walter R. Sassard, MD (Houston, TX)

10:24–10:30 AM; Discussion

10:30–10:38 AM

4. Comparison of Giant and Nongiant Symptomatic Herniated Thoracic Discs: An Analysis of 104 Consecutive Surgical Cases

Curtis A. Dickman, MD (Phoenix, AZ)

10:38–10:46 AM

5. Image Guided Thoracoscopic Spinal Surgery

J. Patrick Johnson, MD (Los Angeles, CA); Ramin Shahidi; Michael Saracen, (Palo Alto, CA)

10:46–10:54 AM

6. Minimally-Invasive Thoracoscopic-Assisted Anterior Repair of Thoracic and Thoracolumbar Fractures: A Single Institution Experience with 300 Procedures

Larry T. Khoo, MD (Los Angeles, CA); Rudolf Beisse, MD; Michael Potulski, MD (Murnau, Germany); Srinath Samudrala, MD (Los Angeles, CA)

10:54–11:00 AM; Discussion

11:00–11:08 AM

7. Failure Rates in Anterior Cervical Foramenotomy

Robert J. Hacker, MD; Chris G. Miller, MD (Eugene, OR)

11:08–11:16 AM

8. Clinical Experience with Screw Trajectory and Safety in Percutaneous Pedicle Screws and Rods

Russ P. Nockels, MD (Maywood, IL)

11:16–11:24 AM

9. Clinical Accuracy of Fluoroscopic Computer-Assisted Pedicle Screw Placement. A Prospective CT Analysis

Justin H. T. Pik, MBBS, FRACS; Y. Raja Rampersaud, MD, FRCSC (Toronto, ON, Canada)

11:24–11:30 AM; Discussion

11:30–11:38 AM

10. Surgical Treatment of Cervical Chordomas: A Twenty Year Experience

Narayan Sundaresan, MD; Allen S. Rothman, MD (New York, NY); Norbert Liebsch, MD (Boston, MA) Vallo Benjamin, MD (New York, NY)

11:38–11:46 AM

11. Reconstructive Thoracolumbar Vertebrectomy for Metastatic Spinal Tumors

Alan T. Villavicencio, MD; Jongsoo Park, MD; John K. Stokes, MD; Paul Liu, MD; J. Patrick Johnson, MD

11:46–11:54 AM

12. Tumors of the Brachial Plexus Region: A 10-Year Series

Jason H. Huang, MD; Eric L. Zager, MD (Philadelphia, PA)

11:54 AM–12:00 PM; Discussion

12:00 Noon–1:00 PM

Lunch with Exhibitors; Exhibit Hall

"WHAT'S NEW?" SESSION II

Moderators: Peter C. Gerszten, MD,

Stephen T. Onesti, MD

CONTRIBUTED PAPERS

1:00–2:40 PM

Salons 5–8

Moderators: Michael G. Fehlings, MD PhD; Mark R. McLaughlin, MD

1:00–1:08 PM

13. Autologous Activated Macrophage Therapy Shows Potential as a Treatment for Acute Complete Spinal Cord Injury

Valentin Fulga, MD (Ness Ziona, Israel); Nachshon Knoller, MD; Moshe Hadani, MD (Ramat Gan, Israel); Jacques Brothi, MD (Brussels, Belgium); Rappaport Z. Harry, MD (Petach Tikva, Israel); Gavriel Zelig, MD (Ramat Gan, Israel); Joseph Attias, MD (Petach Tikva, Israel); Gustavo Auerbach, DMD (Ness Ziona, Israel)

1:08–1:16 PM

14. Localized Superfusion with an Oncotic Agent Following Spinal Cord Injury: Effect on Edema and Functional Outcome

Christopher B. Shields, MD; Yi Ping Zhang, MD (Louisville, KY); Glenn D. Frazer, PhD (Philadelphia, PA); Darlene A. Burke, MA (Louisville, KY)

1:16–1:24 PM

15. The Relationship Between Residual Motor Function and the Degree of Adaptive Change in the Primary Motor Cortex in Patients with Cervical Spinal Cord Trauma

David J. Mikulis, MD; Michael T. Jurkiewicz; William E. McLroy, PhD; Richard Staines, PhD; Lynda Rickards, RN; Sukvinder Kalsi- Ryan, BS, Adrian Crawley, PhD; Molly Verrier, MS; Michael G. Fehlings, MD (Toronto, Ontario, Canada)

1:24–1:30 PM; Discussion

1:30–1:38 PM

16. The Effect of Increasing Beta-1 Integrin Expression on Motoneurone Survival and Regeneration Following Axotomy in Neonatal Rats

Hu Liang Low, MSc, FRCS (Swansea, UK); Linda Greensmith, PhD (London, UK)

1:38–1:46 PM

17. Deletion of the FAS Gene is Associated with Improved Neurological Outcome and Reduced Axonal Degeneration After Spinal Cord Injury

Steven Casha, MD; Michael G. Fehlings, MD, PhD, FRCSC (Toronto, Ontario, Canada)

1:46–1:54 PM

18. Human and Primate Olfactory Ensheathing Glia from Olfactory Bulb or Olfactory Epithelium. Harvest Methods, Cell Yields, Lentiviral Transfection, Transplantation Following Cord Injury, Axonal Regeneration and Behavioral Outcome

Carlos Casas, MD; Maria Oliveira, DVM; Alex Ibanez, MSc; Alex Marcillo, MD; Irene Margitich, MSc; Patrick Wood, PhD; James D. Guest, MD, PhD (Miami, FL)

1:54–2:02 PM

19. Embryonic Stem (ES) Cell-Derived Neurons Extend Axons Through Injured Spinal Cord

Todd J. Stewart, MD; Michael J. Howard, PhD; Marina Platik, PhD; Carl Lauryssen, MD; John W. McDonald, MD, PhD (St. Louis, MO)

2:02–2:10 PM; Discussion

2:10–2:18 PM

20. Postoperative Assessment of Carpal Tunnel Decompression Using Magnetic Resonance Neurography

B. Anthony Bell, MD; Simon A. Cudlip, FRCS; Franklyn A. Howe, PhD; Andrew G. Clifton, FRCR; Martin S. Schwartz, MD (London, UK)

2:18–2:26 PM

21. Ulnar Nerve Decompression vs Submuscular Transposition—Randomised Prospective Study

Michael T. Biggs, MD; Johnathon A. Curtis, MD (Sydney, Australia)

2:26–2:34 PM

22. Carpal Tunnel Syndrome in Patients Undergoing Long-Term Hemodialysis

Takaaki Iida, MD; Hideaki Iizuka, MD (Uchinada, Japan)

2:34–2:40 PM; Discussion

ORAL POSTER PRESENTATIONS

2:40–3:10 PM

Salons 5–8

Moderators: Christopher G. Paramore, MD, Robert J. Spinner, MD

2:40–2:43 PM

23. Management of Pharyngeal Perforation Related to Cervical Surgery

Rabih Tawk, MD; Gregory J. Przybylski, MD (Chicago, IL)

2:43–2:46 PM

24. Comparison of Two Techniques in the Management of Complex Spinal Wound Infections

Juan C. Jimenez, MD; Cynthia Buzzea, RN, NP; Noam Y. Stadlan, MD; Mitchell R. Gropper, MD (Chicago, IL)

2:46–2:49 PM

25. Hyaluronate: A Mediator of Glial Scar Formation and Inhibition of Axonal Outgrowth

Charles Kuntz, IV, MD; Jaime Struve; Therese Tuohy; Michael G. Fehlings, MD; Larry Sherman, PhD (Cincinnati, OH)

2:49–2:52 PM

26. Epidural Glutamate from Herniated Lumbar Disc Material as A Nociceptive Stimulus in Lumbar Radiculopathy

J. Frederick Harrington, MD (Providence, RI); Arthur A. Messier, PhD; Elizabeth Yu; Kelly Barker

2:52–2:55 PM

27. Dysesthetic Pain in Patients with Syringomyelia and Chiari Type I Malformation: Analysis of Pre- and Post Operative Condition

Kazutoshi Hida, MD; Toshitaka Seki, MD; Yoshinobu Iwasaki, MD (Sapporo, Japan)

2:55–2:58 PM

28. Peripheral Selective Denervation for Spasmodic Torticollis: Case Series and Review of Literature

Line Jacques, MD; Tina Del Duca, PhD, MBA (Montreal, Canada)

2:58–3:01 PM

29. Filum Terminale Sectioning for the Treatment of Bladder Dysfunction in the Pediatric Population

Jeffrey E. Catrambone, MD; Scott A. Shapiro, MD; Thomas G. Luerssen, MD; Anthony J. Casale, MD (Indianapolis, IN)

3:01–3:04 PM

30. rhBMP-2 a Cost Analysis From a Hospital and Payers Perspective

Christopher I. Shaffrey, MD, (Seattle, WA); David W. Polly, Jr., MD (Washington DC); James W. Ogilvie, MD (Minneapolis, MN); Stephen E. Heim, MD (DuPage, IL)

3:04–3:10 PM; Discussion

3:10–4:00 PM

Beverage Break with Exhibitors; Salons 5–8

“WHAT’S NEW?” SESSION III

Moderators: Michael W. Groff, MD; Ehud Mendel, MD

SCIENTIFIC SESSION II:

4:00–5:30 PM

CONTROVERSIES IN PERIPHERAL NERVE DISORDERS

Description

This session will continue the popular debate forum for controversial problems in peripheral nerve surgery. Recognized experts will defend opposing viewpoints on the ideal treatment of both common and challenging peripheral nerve disorders. Concerns related to the accurate diagnosis and optimal treatment methods will be discussed, with an emphasis on choosing the alternative that will provide the best long-term results.

Moderators: John E. McGillicuddy, MD; Rajiv Midha, MD

Learning Objectives:

Upon completion of this program, participants should be able to:

1. Evaluate the treatment options for carpal tunnel syndrome.
2. Recognize the diagnostic and treatment dilemmas in the newborn with a brachial plexus palsy.
3. Discuss the evaluation and management of foot drop.

SURGERY FOR CARPAL TUNNEL SYNDROME

4:00–4:30 PM

Endoscopic Release is Superior

David F. Jimenez, MD (Missouri)

Open Release is Superior

Allan H. Friedman, MD (Duke)

MANAGEMENT OF OBSTETRIC BRACHIAL PLEXUS PALS

4:30–5:00 PM

Early Surgery is Superior

Allan J. Belzberg, MD (Hopkins)

Conservative Approach/Delayed Surgery is Superior

David G. Kline, MD (LSU)

MANAGING FOOT DROP IN THE PATIENT WITH PERONEAL AND SCIATIC NERVE DISORDERS

5:00–5:30 PM

Nerve Decompression and Reconstruction is Superior

Robert L. Tiel, MD (LSU)

Tendon Transfer is Superior

Kevin O. Lillehei, MD (University of Colorado)

5:30–7:00 PM

“Happy Hour on the Beach” Reception
Beach Club Beach

Meeting Agenda

FRIDAY, MARCH 1

6:15 AM-1:00 PM

Registration; Asbury Rotunda

6:30-7:45 AM

Continental Breakfast; Asbury Lobby

8:00 AM-12:00 Noon

Exhibit & Poster Viewing

Grand Harbor North & South Ballroom,
Salons 1-4

10:20-11:10 AM

Beverage Break with Exhibitors; Salons 5-8

"WHAT'S NEW?" SESSION IV

Moderators: Bernard H. Guiot, MD;

Andrew T. Dailey, MD

12:15 PM

Depart for Golf Tournament

Disney's Palm Golf Course

1:00 PM

Tennis Tournament

Tennis Courts at the Contemporary Resort

SCIENTIFIC PROGRAM

6:45 AM-4:30 PM

Salons 5-8

6:45-7:15 AM

Challenging Spine Tumor Cases

Moderator: Ziya L. Gokaslan, MD

Panelists: Barry D. Birch, MD;

Seth M. Zeidman, MD

SCIENTIFIC SESSION III:

7:30-9:15 AM

CERVICAL SPINE SURGERY:

STATE OF THE ART

Description

This session will focus on the recent advances and latest developments in the rapidly changing arena of surgery of the cervical spine. A panel of experts will discuss new instrumentation techniques, novel and less-invasive surgical techniques, and challenges in the clearance of the cervical spine in trauma patients.

Moderators: Vincent C. Traynelis, MD;

Stephen M. Papadopoulos, MD

Learning Objectives

Upon completion of this program, participants should be able to:

1. Recognize new developments in the radiological clearance of spine trauma.
2. Discuss the evolution of cervical spine instrumentation techniques.
3. Evaluate emerging developments in cervical surgical approaches.

7:30-7:45 AM

Cervical Spine Clearance in Trauma

Mitchel B. Harris, MD

7:45-8:00 AM

Anterior Instrumentation

Regis W. Haid, Jr., MD

8:00-8:15 AM

Posterior Instrumentation

Rick C. Sasso, MD

8:15-8:30 AM

Cervical Cages

Scott H. Kitchel, MD

8:30-8:45 AM

Anterior Foramenotomy

J. Patrick Johnson, MD

8:45-9:00 AM

Posterior Foramenotomy

Tim E. Adamson, MD

9:00-9:15 AM

Laminoplasty

H. Alan Crockard, DSc FRCS

World Spine II Presentation

9:15-9:20 AM

Edward C. Benzel, MD

AWARDS SESSION

9:20-10:20 AM

Salons 5-8

Moderators: Timothy C. Ryken, MD;

Michael G. Fehlings, MD, PhD

9:20-9:35 AM

MAYFIELD BASIC SCIENCE AWARD & PAPER

Award Presented by: Timothy C. Ryken, MD

2002 Recipient: Edward R. Smith, MD

31. Increased Frequency of Cells Expressing a Neuronal Phenotype in the Injured Spinal Cord After Intravascular Transplantation with Bone Marrow Cells

Edward R. Smith, MD; Tao Cheng, MD; David

Scaddad, MD; E. Antonio Chiocca, MD, PhD

(Boston, MA)

9:35-9:50 AM

MAYFIELD CLINICAL SCIENCE AWARD & PAPER

Award Presented by: Timothy C. Ryken, MD

2002 Recipient: Ketan R. Bulsara, MD

32. Unravelling the Enigma of the Filum Terminale: Basic Science and Clinical Evidence

Ketan R. Bulsara, MD (Durham, NC); Thomas

J. Cummings, MD; Ali R. Zomorodi, MD

(Durham, NC) Alan T. Villavicencio, MD (Los

Angeles, CA) Timothy M. George, MD

(Durham, NC)

9:50-10:00 AM

UPDATE ON RESEARCH CONDUCTED WITH A SPINE SECTION GRANT

33. The Effect of Wearing a Restrictive Neck Brace on Driver Performance

Vincent C. Traynelis, MD; Christopher J. Barry,

MD; Matthew Rizzo, MD; Warren Darling, PhD;

Julie Jermeland, BS; Darin W. Smith, MD;

Peter J. Lennarson, MD (Iowa City, IA)

10:00-10:15 AM

POSTER SESSION AWARDS

Awards Presented by: Michael W. Groff, MD

GRANT RESEARCH AWARDS

Awards Presented by: Michael G. Fehlings, MD, PhD

2002 CLOWARD FELLOWSHIP AWARD

Award Presented by: Timothy C. Ryken, MD

2002 Recipient: Langston T. Holly, MD

10:15-10:20 AM

UPDATE ON RESEARCH FROM THE 2001 CLOWARD FELLOWSHIP RECIPIENT

Jason E. Garber, MD

10:20-11:10 AM

Beverage Break with Exhibitors; Salons 5-8

"WHAT'S NEW?" SESSION IV

Moderators: Bernard H. Guiot, MD;

Andrew T. Dailey, MD

ORAL POSTER PRESENTATIONS

11:10-11:50 AM

Salons 5-8

Moderators: Paul M. Arnold, MD;

Mitchell R. Gropper, MD

11:10-11:13 AM

34. Craniovertebral Junction Fixation with Transarticular Screws: Biomechanical Analysis of a Novel Technique

L. Fernando Gonzalez, MD; Neil R. Crawford,

PhD; Robert H. Chamberlain, BSE; Luis E.

Perez Garza, MD; Mark C. Preul, MD; Nicholas

Theodore, MD; Curtis A. Dickman, MD; Volker

K.H. Sonntag, MD (Phoenix, AZ)

11:13-11:16 AM

35. Combination Atlas and Axis Fractures

Manali Barua, MD; Vincent C. Traynelis, MD;

Timothy C. Ryken, MD (Iowa City, IA)

11:16-11:19 AM

36. Cervical Pedicle Screws/Plates or Lateral Mass Screws/Plates Combined with Anterior Plating: A Biomechanical In Vitro Study

Juan C. Bartolomei, MD (Phoenix, AZ); Kaushik

Das, MD (New York, NY); Neil R. Crawford,

PhD; Robert H. Chamberlain, BSE; Sung Chan

Park, MD; James J. Lynch, MD; Curtis A.

Dickman, MD; Volker K.H. Sonntag, MD

(Phoenix, AZ)

11:19-11:22 AM

37. Posterior Lumbar Interbody Fusion (PLIF) Using an Impacted, Bioabsorbable Device

Brian R. Subach, MD (Atlanta, GA); Charles L.

Branch, MD; Joseph T. Alexander, MD

(Winston-Salem, NC); Regis W. Haid, Jr., MD;

Gerald E. Rodts, Jr., MD (Atlanta, GA)

11:22–11:25 AM

38. Does Screw Size or Insertional Technique Matter in the Thoracic Spine? A Biomechanical Human Cadaver Study

Robert F. Heary, MD (Newark, NJ); Serkan Inceoglu, MS; Jessica L. Secor, BS; Lisa A. Ferrara, MS (Cleveland, OH)

11:25–11:28 AM

39. Pullout Resistance of Extrapedicular Screws Used as a Salvage Procedure

Mark Potocnjak, MD; Robert H. Chamberlain, BSE (Phoenix, AZ); Mark S. Adams, MD (Saginaw, MI); Sung Chan Park, MD (Seoul, Korea); Volker K.H. Sonntag, MD; Neil R. Crawford, PhD (Phoenix, AZ)

11:28–11:31 AM

40. Thoracic Vertebral Body Screw Placement Using Fluoroscopic, FluoroNav™, and Stealth™ Guidance: A Cadaveric Study

Gregory C. Wiggins, MD; Sohail K. Mirza, MD (Seattle, WA); Julie E. York, MD (Chicago, IL); Carlo Bellabarba, MD (Seattle, WA); Charles Kuntz, IV, MD (Cincinnati, OH); Jens Chapman, MD; Christopher I. Shaffrey, MD (Seattle, WA)

11:31–11:34 AM

41. Percutaneous Stereotactic Translaminar Screw Fixation of the Lumbar Spine

Barry D. Birch, MD (Scottsdale, AZ)

11:34–11:37 AM

42. Minimally Invasive Posterior Lumbar Interbody Fusion: Initial Experience

Jeffrey D. Gross, MD; Sylvain Palmer, MD (Mission Viejo, CA)

11:37–11:40 AM

43. Laparoscopic Anterior Lumbar Interbody Fusion (ALIF) and Percutaneous Pedicle Screw Insertion for the Treatment of Spondylolisthesis

Michael A. Lefkowitz, MD; Jason R. Hubbard, MD; Najeeb M. Thomas, MD; Kevin T. Foley, MD (Memphis, TN)

11:40–11:43 AM

44. Analysis of the Acroflex Lumbar Disc as an Intervertebral Disc Prosthesis: A Non Human Primate Model

Presented by: Samir S. Kulkarni, MD
Gary L. Lowery, MD, PhD (Phoenix, AZ); W. Bryan Cunningham, MSc; A.E. Dimitriev, BS; C. M. Orbegosc, MD (Baltimore, MD); Hassan A. Serhan, PhD (Raynham, MA); Paul C. McAfee, MD (Baltimore, MA)

11:43–11:46 AM

45. Clinical Factors Influencing on the Therapeutic Results of Percutaneous Vertebroplasty in Osteoporotic Vertebral Compression Fractures

Chun-Kun Park, MD; Kyung-Sik Ryu, MD (Seoul, Korea)

**ANNUAL BUSINESS MEETING
11:50 AM–12:00 NOON**

**PRACTICE MANAGEMENT
SEMINAR**

**12:30–4:30 PM
Salons 5–8**

**BENCHMARKING FINANCIAL SUCCESS
IN THE SPINE PRACTICE**

Seminar Directors: Debra L. Rheinisch; Debra R. Mills, RN, CPC

12:30; Introduction

12:40–1:40 PM

**Practice Management Efficiency in the
Managed Care Environment**

Information to include: methods to improve officer operations and increase reimbursements, front desk operations, front office script, collecting co-payments, health plan referrals/authorizations, scheduling patient visits, accounts receivable management—your money, meeting with your billing office staff, need to appeal—wrong pay, no pay, slow pay, and how to evaluate a charge document.

1:40–2:30 PM

**Improving Reimbursement for Complex
Spine Surgical Procedures**

Information to include: successful charge capture, how to reconcile insurance carrier payment, explanation of "Benefits Receipt Analysis" for complex spine reimbursement, effective methods for revenue recovery and collections, and how to write appeal letters to appeal incorrect payment for complex spine procedures.

2:30–2:40 PM; Break

2:40–3:30 PM

**How to Re-negotiate Managed Care
Contract for Carve-outs for Complex Spine**

Information to include: developing clinical vignettes to support carve-out agreement, identifying complex spine surgeries for carve-out, meeting with the payers, how to request additional reimbursement, and use of RBRVS fee schedule for carve-out for complex spine.

3:30–3:40 PM; Break

3:40–4:30 PM

**Financial Management and Practice
Benchmarks**

Information to include: how to calculate actual gross and net collection ratios, how to calculate days in A/R ratios, how to read an "Aged Trial Balance," how to analyze your monthly accounts receivable management reports, and how to trouble-shoot your billing and collections department.

12:15 PM

Depart for Golf Tournament
Disney's Palm Golf Course

1:00 PM

Depart for Tennis Tournament
Tennis Courts at the Contemporary Resort

SATURDAY, MARCH 2

6:15 AM–1:00 PM

Registration; Asbury Rotunda

6:30–7:45 AM

Continental Breakfast; Asbury Lobby

8:00–11:00 AM

Exhibit & Poster Viewing
Grand Harbor North & South Ballroom,
Salons 1–4

9:30–10:20 AM

Beverage Break with Exhibitors; Salons 5–8
"WHAT'S NEW?"—SESSION V
Moderators:
Julie E. York, MD; Charles Kuntz IV, MD

SCIENTIFIC PROGRAM

**6:45 AM–5:00 PM
Salons 5–8**

6:45–7:15 AM

Challenging Spine Trauma Cases

Moderator: Nevan G. Baldwin, MD
Reviewers: Perry A. Ball, MD; Christopher H. Comey, MD; Ehud Mendel, MD

**SCIENTIFIC SESSION IV:
7:30–9:30 AM
Salons 5–8**

CONTROVERSIES IN SPINE SURGERY

Description

Lively debate sessions will be held among recognized experts on a variety of topics that are frequently encountered in neurosurgical practices. As always, the speakers will be tested with their ability to present a convincing defense of their viewpoint as well as to rebut the opinions of their counterpart. This session has always been very well received and moderators have been selected who will help add fuel to the fire.

Moderators: Richard G. (Is that your final answer?) Fessler, MD, PhD; David W. (You are the weakest link!) Cahill, MD

Learning Objectives

Upon completion of this program, participants should be able to:

1. Recognize the variation and rationale behind the management options presented for each topic.
2. Discuss the implications of the techniques of management presented.

Topics/Cases/Speakers

1. Anterior Cervical Discectomy

- A. Anterior Foramenotomy without Fusion
J. Patrick Johnson, MD
- B. Autograft Alone
Anthony Frempong-Boadu, MD
- C. Allograft and Plate
Scott Shapiro, MD

Meeting Agenda

SATURDAY, MARCH 2 (CONT.)

2. Degenerative Lumbar Spondylolisthesis

- A. Decompression Alone
Joseph T. Alexander, MD
- B. Fusion *in situ*
Gerald E. Rodts, MD
- C. Reduction
Christopher I. Shaffrey, MD

3. Cervical Spondylotic Myelopathy

- A. Anterior Approach
Richard L. Saunders, MD
- B. Posterior Decompression/Fusion
Gary L. Rea, MD
- C. Laminoplasty
To be Announced

4. Degenerative Disc and Low Back Pain

- A. ALIF
J. Kenneth Burkus, MD
- B. PLIF
Charles L. Branch, Jr., MD
- C. 360 Procedure
Robert F. Heary, MD

9:30–10:20 AM

Beverage Break with Exhibitors; Salons 5–8
"WHAT'S NEW?"—SESSION V
Moderators: Julie E. York, MD;
Charles Kuntz IV, MD

CONTRIBUTED PAPERS 10:20 AM–12:00 NOON Salons 5–8

Moderators: Nevan G. Baldwin, MD;
Michael G. Kaiser, MD

10:20–10:28 AM

46. A Biomechanical Comparison of Transfacet Screw Fixation and Pedicle Screw Fixation: Effects of Long-Term Repetitive Cycling

Lisa A. Ferrara, MS; Jessica L. Secor, BS;
Byungho Jin, MD; Edward C. Benzel, MD
(Cleveland, OH); Michael G. Kaiser, MD

10:28–10:36 AM

47. Biomechanics of Lumbar Transvertebral Cage/Graft Fixation

Patrick P. Han, MD (Phoenix, AZ); Sung Chan Park, MD (Seoul, Korea); Robert H. Chamberlain, BSE; Curtis A. Dickman, MD;
Neil R. Crawford, PhD (Phoenix, AZ)

10:36–10:44 AM

48. Biomechanics of Lateral Mass/Pedicle Screw Fixation at C1–C2

James J. Lynch, MD; Neil R. Crawford, PhD;
Robert H. Chamberlain, BSE; Juan C. Bartolomei, MD; Volker K.H. Sonntag, MD
(Phoenix, AZ)

10:44–10:50 AM; Discussion

10:50–10:58 AM

49. Prospective Comparison of Fluoro-Nav to Fluoroscopy and Plain Radiography for Lumbar Pedicle Screw Placement

Daniel K. Resnick, MD (Madison, WI)

10:58–11:06 AM

50. Radiofrequency Lesioning Using Two Different Time Modalities for the Treatment of Lumbar Discogenic Pain—A Randomized Trial

Omur Ercelen; Tunc Oktenoglu; Erhan Bulutcu;
Medhi Sasani; Fahir Ozer; Ali Zirh; Ali Cetin
Sarioglu (Istanbul, Turkey)

11:06–11:14 AM

51. Treatment of Neuropathic Pain by Axonal Transport

Aaron G. Filler, MD, PhD (Santa Monica, CA);
Garth Whiteside, PhD; Mark Bacon, PhD;
Martyn Frederickson, PhD; Jonathan Clark,
PhD; Chris Abell, PhD; Raj Munglani, MB;
Andrew M.L. Lever, MD (Cambridge, UK)

11:14–11:20 AM; Discussion

11:20–11:28 AM

52. Occipitocervical Stabilization in Rheumatoid Arthritis Patients Using the "Inside-Outside" Technique

Faheem A. Sandhu, MD, PhD (Washington DC); T. Glenn Pait, MD; Kim Vognet, RN (Little Rock, AK); Fraser C. Henerson, MD
(Washington DC)

11:28–11:36 AM

53. Impacted PLIF: 2 Year Follow-up in 42 Patients

Bryan B. Barnes, MD; Regis W. Haid Jr., MD;
Gerald E. Rodts, Jr., MD (Atlanta, GA)

11:36–11:44 AM

54. Facet Injections in Patient Selection for Spinal Fusions

Gordon Tang, MD; Thomas W. Lawhorne, BS;
Gerald E. Rodts, Jr., MD; Regis W. Haid Jr., MD
(Atlanta, GA)

11:44–11:52 AM

55. Use of 2-Octyl-cyanacrylate for Wound Closure in Spinal Surgery

Nicholas Theodore, MD; Mark Potocnjak, MD;
William Jacobsen, MD; Janine Drabier, RN;
Neil R. Crawford, PhD; Volker K.H. Sonntag,
MD (Phoenix, AZ)

11:52 AM–12 Noon; Discussion

MEETING ADJOURNED 12:00 PM

SPECIAL COURSES II

1:00–5:00PM

ASBURY A

ESSENTIALS OF PERIPHERAL NERVE SURGERY

Course Director: Rajiv Midha, MD

CME Credits: 4 hours

Description

This will be a didactic course discussing the essentials of peripheral nerve disorders, in terms of diagnosis, treatment, and pearls. An outstanding faculty has been assembled from North America and Australia. This course is targeted toward physicians newly in practice, fellows and residents, and will specifically review issues that are pertinent to clinical practice, as well as for preparation for the written and oral board examinations.

Learning Objectives

Upon completion of this program, participants should be able to:

1. Convey basic information on diagnosis and management of common nerve injuries, entrapments and disorders.
2. Discuss the diagnosis and differential diagnoses of common nerve conditions; particularly those that have overlap to spinal conditions.
3. Evaluate those nerve conditions that need emergent and urgent management versus those that can be managed in a more delayed fashion.
4. Distinguish common peripheral nerve conditions from unusual problems that should be referred to subspecialists.

Schedule

1:00–1:15 PM

Nerve Injury Basics
Rajiv Midha, MD

1:15–1:30 PM

Nerve Emergencies
Allen H. Maniker, MD

1:30–1:45 PM

Common Entrapments
Michael T. Biggs, MD

1:45–2:00 PM

Unusual Entrapments: The Pearls
Eric L. Zager, MD

2:00–2:15 PM

Differential Diagnosis
(Clinical, Electrical and Imaging)
Robert L. Tiel, MD

2:15–2:30 PM

Medical Nerve Conditions that Should not be Operated On
Robert J. Spinner, MD

2:30–2:45 PM

Surface anatomy for Common Nerve Operations
Kevin O. Lillehei, MD

2:45–2:55 PM; Coffee/Refreshment Break
 2:55–3:10 PM
 Brachial Plexus Anatomy Made Ridiculously Simple
Daniel H. Kim, MD
 3:10–3:25 PM
 Principles of Management of Nerve Tumors
Line Jacques, MD
 3:25–3:40 PM
 Painful Neuromas
Allan J. Belzberg, MD
 3:40–5:00 PM
 Master Illustrated Cases
 3:40–4:20 PM *David G. Kline, MD*
 4:20–5:00 PM *John E. McGillicuddy, MD*

SPECIAL COURSES III

1:00–5:00PM

ASBURY B

FUNDAMENTAL PRINCIPLES OF SPINE SURGERY

Course Director: *Daniel K. Resnick, MD*
 CME Credits: 3.5 hours

Description

A didactic course reviewing the fundamentals of spine surgery, through a discussion of the management of low back pain. This course is targeted toward physicians newly in practice, fellows and residents, and others who are interested in reviewing the basic principles of spinal surgery. A panel of spine surgeons will be available for presentations and to lead discussions on the indications and techniques of spine surgery. Educational materials provided.

Learning Objectives

Upon completion of this program, participants should be able to:

1. Formulate a differential diagnosis and plan a strategy for the evaluation and treatment of low back pain.
2. Evaluate the rationale behind surgical treatment.
3. Assess strategies for avoidance of complications and optimization of outcome.
4. Discuss the role of outcome assessment in research and clinical practice.

Schedule

1:00–1:10 PM
 Introduction
Daniel K. Resnick, MD
 1:10–1:25 PM
 Pathophysiology of Low Back Pain (LBP)
Michael W. Groff, MD
 1:25–1:40 PM
 Imaging Strategies for Evaluating LBP
Christopher E. Wolfla, MD
 1:40–2:00 PM
 Patient Selection Criteria for Surgery
Mark R. McLaughlin, MD

2:00–2:15 PM
 Outcome Assessment Measures
Peter C. Gerszten, MD
 2:15–2:30 PM; Coffee/Refreshment Break
 2:30–2:45 PM
 Posterolateral Fusion for LBP
Andrew T. Dailey, MD
 2:45–3:00 PM
 Anterior Lumbar Interbody Fusion for LBP
Julie E. York, MD
 3:00–3:15 PM
 PLIF and TLIF Techniques for LBP
Michael G. Kaiser, MD
 3:15–3:30 PM
 Intradiscal Electrotherapy for LBP
Gregory R. Trost, MD
 3:30–3:45 PM
 The Role of Spinal Cord Stimulation
Aruna Ganju, MD
 3:45–4:00 PM
 Vertebroplasty and Kyphoplasty
Jeffrey D. Gross, MD
 4:00–4:15 PM; Coffee/Refreshment Break
 4:15–5:00 PM
 Case presentations
Entire Faculty

SPECIAL COURSES IV

1:00–5:00PM

ASBURY C

CPT CODING FOR SPINE SURGEONS

Course Director: *Gregory J. Przybylski, MD*
 CME Credits: 3.5 hours

Description

This course begins with a didactic segment to establish a foundation of knowledge in coding of evaluation and management, as well as surgical services. An interactive session follows with case scenarios serving as a basis for investigating the nuances of coding for spinal surgery. Although targeted at the practicing spine surgeon, this course would also be useful for the fellow or resident about to enter practice.

Learning Objectives

Upon completion of this program, participants should be able to:

1. Discuss ICD-9 (diagnostic) and CPT (clinical and surgical service) coding from the unique perspective of the spinal surgeon.
2. Analyze the methodology for valuation of CPT codes and its application toward accurate description of surgical services.
3. Formulate a practical understanding of coding to facilitate efficiency of data tracking and billing.

NOTES: